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(71) Applicant and

(72) Inventor: MATTHEWS, Robin [GB/US]; 1135 Dulaney
Gate Circle, Cockeysville, MD 21030 (US).

(74) Agent: GAMSON, Robert, M.; Armstrong, Westman &
Hattori, LLP, Suite 220, 502 Washington Avenue, Towson,
MD 21204 (US).

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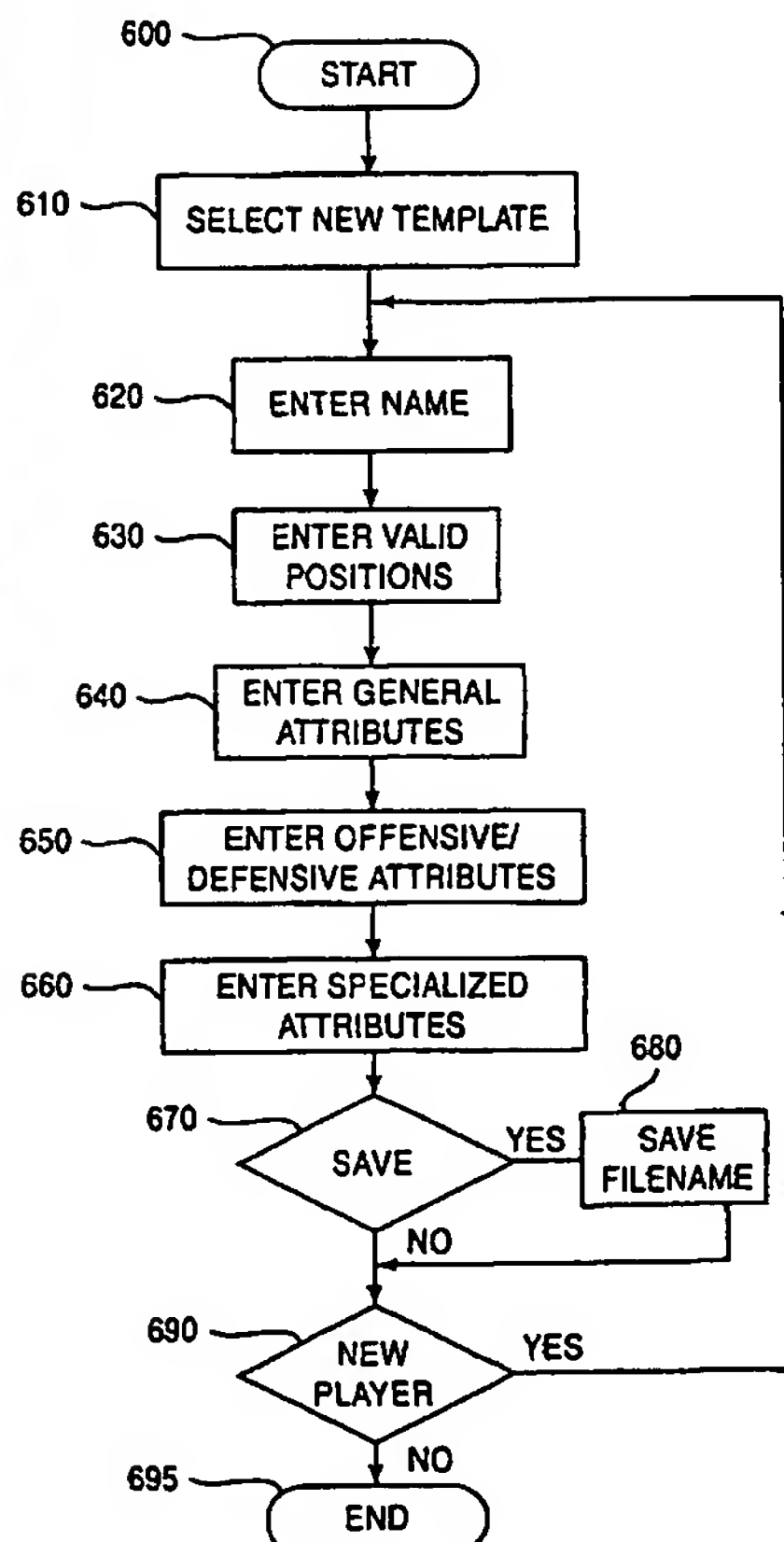
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(54) Title: AN ATHLETIC GAME LEARNING TOOL, CAPTURE SYSTEM, AND SIMULATOR



(57) Abstract: A system and method is provided for simulating an athletic event. This system and method begins by entering players for positions (630) in a squad on an offensive, defensive or special team, wherein each player has vital statistics, general attributes (640), offensive/defensive attributes (650) and specialized attributes (660) which predict athletic performance associated therewith. Players are then placed in a formation. A play is then established based on the formation in which the moving pattern and activity of each player is defined. The play is then simulated by having each player executing the moving pattern and activity, as modified by the vital statistics, general attributes (640), offensive/defensive attributes (650) associated with each player.

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

AMENDED CLAIMS

[received by the International Bureau on 04 February 2004 (04.02.04);
original claims 1-5, 9, 15-19, 25-28 and 41-45 have been amended,
new claims 48-51 have been added (10 pages)]

+ STATEMENT

1. A method for simulating an athletic event, comprising:
entering players for positions in a squad on an offensive, defensive or special
5 team, wherein each player has vital statistics, general attributes, offensive/defensive attributes
and specialized attributes which predict athletic performance;
placing each player in a formation;
establishing a play based on the formation in which the moving pattern and
activity of each player is defined;
10 simulating the play by having each player executing the moving pattern and
activity as modified by the vital statistics, general attributes, offensive/defensive attributes and
specialized attributes associated with each player, wherein the outcome of the play is based upon
the moving patterns and activities as modified by the attributes associated with each player.
2. The method for simulating an athletic event recited in claim 48, wherein the vital
15 statistics comprise the player's height and weight.
3. The method for simulating an athletic event recited in claim 48, wherein the
general attributes comprise acceleration, agility, awareness, elusiveness, jumping, speed,
stamina, and strength.
4. The method for simulating an athletic event recited in claim 48, wherein the
20 offensive/defensive attributes comprise breaking tackles, catching, pass blocking, run blocking,
throwing accuracy, and throwing power.
5. The method for simulating an athletic event recited in claim 48, wherein the
specialized attributes comprise injury recovery, toughness, instinct and experience.

6. The method for simulating an athletic event recited in claim 1, further comprising:

entering each play in a playbook categorized according to the type of play.

5 7. The method for simulating an athletic event recited in claim 1, further comprising:

viewing the play as either a two-dimensional overhead view, a two-dimensional side view, or a three-dimensional animated player view.

10 8. The method for simulating an athletic event recited in claim 7, further comprising:

exporting the play established in the form of a movie.

9. A system for simulating an athletic event, comprising:
a player module to enter players for positions in a squad on an offensive, defensive or special team, wherein each player has attributes which predict athletic performance;

15 a play module to establish a play based on a formation in which the moving pattern and activity of each player is defined; and

a run designed play module to simulate the play by having each player executing the moving pattern and activity as modified by the vital statistics, general attributes, offensive/defensive attributes and specialized attributes associated with each player, wherein the outcome of the play is based upon the moving patterns and activities as modified by the attributes associated with each player.

20 10. The system for simulating an athletic event as recited in claim 9, further comprising:

25 a squad creation module to create a squad of players based upon the players entered using the player module, wherein each squad of players is associated with some specific game function.

11. The system for simulating an athletic event as recited in claim 10, further comprising:

a formation module to establish the formation using the squad of players.

5 12. The system for simulating an athletic event as recited in claim 11, further comprising:

a playbook module to enter each play in a playbook categorized according to the type of play.

10 13. The system for simulating an athletic event as recited in claim 12, further comprising:

a player specific camera viewing module to view the play as either a two-dimensional overhead view, a two-dimensional side view, or a three-dimensional animated player view.

15 14. The system for simulating an athletic event as recited in claim 12, further comprising:

an exporting play module to export the play established in the form of a movie.

15 15. The system for simulating an athletic event recited in claim 49, wherein the vital statistics comprise the player's height and weight.

20 16. The system for simulating an athletic event recited in claim 49, wherein the general attributes comprise acceleration, agility, awareness, elusiveness, jumping, speed, stamina, and strength.

17. The system for simulating an athletic event recited in claim 49, wherein the offensive/defensive attributes comprise breaking tackles, catching, pass blocking, run blocking, throwing accuracy, and throwing power.

18. The system for simulating an athletic event recited in claim 49, wherein the specialized attributes comprise injury recovery, toughness, instinct and experience.

19. A computer program embedded in a computer readable medium for simulating an athletic event, comprising:

a player code segment to enter players for positions in a squad on an offensive, defensive or special team, wherein each player has attributes which predict athletic performance;

a play code segment to establish a play based on a formation in which the moving pattern and activity of each player is defined; and

a run designed play code segment to simulate the play by having each player executing the moving pattern and activity as modified by the vital statistics, general attributes, offensive/defensive attributes and specialized attributes associated with each player, wherein the outcome of the play is based upon the moving patterns and activities as modified by the attributes associated with each player.

20. The computer program for simulating an athletic event as recited in claim 19, further comprising:

a squad creation code segment to create a squad of players based upon the players entered using the player code segment, wherein each squad of players is associated with some specific game function.

21. The computer program for simulating an athletic event as recited in claim 20, further comprising:

a formation code segment to establish the formation using the squad of players.

22. The computer program for simulating an athletic event as recited in claim 21, further comprising:

a playbook code segment to enter each play in a playbook categorized according to the type of play.

23. The computer program for simulating an athletic event as recited in claim 22,
5 further comprising:

a player specific camera viewing code segment to view the play as either a two-dimensional overhead view, a two-dimensional side view, or a three-dimensional animated player view.

24. The computer program for simulating an athletic event as recited in claim 23,
10 further comprising:

an exporting play code segment to export the play established in the form of a movie.

25. The computer program for simulating an athletic event recited in claim 50, wherein the vital statistics comprise the player's height and weight.

15 26. The computer program for simulating an athletic event recited in claim 50, wherein the general attributes comprise acceleration, agility, awareness, elusiveness, jumping, speed, stamina, and strength.

27. The computer program for simulating an athletic event recited in claim 50, wherein the offensive/defensive attributes comprise breaking tackles, catching, pass blocking,
20 run blocking, throwing accuracy, and throwing power.

28. The computer program for simulating an athletic event recited in claim 50, wherein the specialized attributes comprise injury recovery, toughness, instinct and experience.

29. A system for capturing real world plays and importing these real world plays in digital format for viewing in different modes, comprising:

25 a digital capture module to record and convert video images into digitally formatted images;

a capture module to identify and track individual players in the digitally formatted images; and

a run actual play module to view the digitally formatted images and highlight individual players from one scene to the next.

30. The system recited in claim 29, wherein the capture module is able to track individual players based on color matching.

31. The system recited in claim 29, wherein run actual play module is able to view the digitally formatted images in a two-dimensional overhead view, a two-dimensional side view, or a three-dimensional animated player view.

32. A computer program embodied on a computer readable medium for capturing real world plays and importing these real world plays in digital format for viewing in different modes, comprising:

a digital capture code segment to record and convert video images into digitally formatted images;

a capture code segment to identify and track individual players in the digitally formatted images; and

a run actual play code segment to view the digitally formatted images and highlight individual players from one scene to the next.

33. The computer program recited in claim 32, wherein the capture code segment is able to track individual players based on color matching.

34. The computer program recited in claim 33, wherein run actual play code segment is able to view the digitally formatted images in a two-dimensional overhead view, a two-dimensional side view, or a three-dimensional animated player view.

35. A method for capturing real world plays and importing these real world plays in digital format for viewing in different modes, comprising:

recording and converting video images into digitally formatted images;

identifying and tracking individual players in the digitally formatted images; and
viewing the digitally formatted images and highlight individual players from one
scene to the next.

5 36. The system recited in claim 35, further comprising tracking individual players
based on color matching.

 37. The system recited in claim 36, further comprising viewing the digitally
formatted images in a two-dimensional overhead view, a two-dimensional side view, or a three-
dimensional animated player view.

10 38. A method of simulating at least a portion of an athletic game or sport and for at
least one player on a team participating in that game or sport, thereby facilitating the training of
said one player under simulated game conditions and in the classroom rather than on the playing
field or arena, and thereby substantially compressing the training time while avoiding a potential
injury to said one player on the practice field or arena; comprising the steps of, first,

15 presenting at least one of the team's defensive or offensive formations and
intended subsequent play; and second,

 presenting the team's opponent's likely action or reaction in response thereto,
respectively; such that the first and second presentations are viewed from the position of said
one player's own eyes had said one player been on the playing field or arena rather than from the
20 perspective of a spectator.

 39. The method of claim 38, further including the steps of
 presenting all of the team's defensive or offensive formations and plays and the
team opponent's likely actions or reactions in response thereto, and
 customizing the presentations for each of the team's respective players on those
25 formations and plays.

 40. The method of claim 39, further including the step of
 factoring in the capabilities for each of the team's respective players, thereby

analyzing each of the team's formations and plays and determining which players on the team should be assigned to the respective formations and plays, and thereby tailoring the team to the opponent and tending to maximize the likelihood of the team beating its opponent.

5 41. A method for simulating an athletic event, comprising:
 entering players for positions in a squad on an offensive, defensive or special
team, wherein each player has attributes which predict athletic performance;
 placing each player in a formation;
 establishing a play based on the formation in which the moving pattern and
10 activity of at least one player is defined;
 simulating the play by having the at least one player executing the moving
pattern and activity as modified by the vital statistics, general attributes, offensive/defensive
attributes and specialized attributes associated the at least one player, wherein the outcome of
the play is based upon the moving patterns and activities as modified by the attributes associated
15 with the at least one player.

 42. The method for simulating an athletic event recited in claim 51, wherein the vital
statistics comprise the player's height and weight.

 43. The method for simulating an athletic event recited in claim 51, wherein the
general attributes comprise acceleration, agility, awareness, elusiveness, jumping, speed,
20 stamina, and strength.

 44. The method for simulating an athletic event recited in claim 51, wherein the
offensive/defensive attributes comprise breaking tackles, catching, pass blocking, run blocking,
throwing accuracy, and throwing power.

 45. The method for simulating an athletic event recited in claim 51, wherein the
25 specialized attributes comprise injury recovery, toughness, instinct and experience.

46. A system for simulating an athletic event, comprising:

a player module to enter players for positions in a squad on an offensive, defensive or special team, wherein at least one player has vital statistics, general attributes, offensive/defensive attributes and specialized attributes which predict athletic performance;

a play module to establish a play based on a formation in which the moving pattern and activity of the at least one player is defined; and

a run designed play module to simulate the play by having the at least one player executing the moving pattern and activity as modified by the vital statistics, general attributes, offensive/defensive attributes and specialized attributes associated with the at least one player, wherein the outcome of the play is based upon the moving patterns and activities as modified by the vital statistics, general attributes, offensive/defensive attributes and specialized attributes associated with the at least one player.

47. A computer program embodied on a computer readable medium for simulating an athletic event, comprising:

a player code segment to enter players for positions in a squad on an offensive, defensive or special team, wherein at least one player has vital statistics, general attributes, offensive/defensive attributes and specialized attributes which predict athletic performance;

a play code segment to establish a play based on a formation in which the moving pattern and activity of the at least one player is defined; and

a run designed play code segment to simulate the play by having the at least one player executing the moving pattern and activity as modified by the vital statistics, general attributes, offensive/defensive attributes and specialized attributes associated with the at least one player, wherein the outcome of the play is based upon the moving patterns and activities as modified by the vital statistics, general attributes, offensive/defensive attributes and specialized attributes associated with the at least one player.

48. The method of claim 1, wherein the attributes associated with each player comprise at least one of the players vital statistics, general attributes, offensive/defensive attributes and specialized attributes.

5 49. The method of claim 9, wherein the attributes which predict athletic performance comprise at least one of the players vital statistics, general attributes, offensive/defensive attributes and specialized attributes.

10 50. The method of claim 19, wherein the attributes which predict athletic performance comprise at least one of the players vital statistics, general attributes, offensive/defensive attributes and specialized attributes.

51. The method of claim 41, wherein the attributes which predict athletic performance comprise at least one of the players vital statistics, general attributes, offensive/defensive attributes and specialized attributes.

STATEMENT UNDER ARTICLE 19(1)

The changes in the claims serve to more clearly define the invention in relation to the references cited in the Search Report.

As amended, the claims are believed to define inventive steps over the documents cited in the International Search Report, considered individually and when combined with any one or more of the other cited documents which fail to disclose or otherwise to make obvious the invention as defined in the respective independent and, with greater particularity, in the subordinate claims considered in the context of the respective independent claims.